

Page 619, *Nemopoda cubensis* Bigot, Annales, 1886, 390.

Page 620, *Nemopoda cæruleiformis* should read *cæruleifrons*.

Page 652, under *Leucopis nigricornis*, add Needham, Psyche, 1903, 27, larvæ feed on *Aphis cephalanthi*. — Lake Forest, Ill.

## DESCRIPTIONS OF SOME AMERICAN MOSQUITOES.

BY HARRISON G. DYAR AND FREDERICK KNAB,

WASHINGTON, D. C.

### *Aedes angustivittatus*, new species.

Proboscis brown; palpi entirely dark; head with a narrow pale margin behind the eyes and the vertex broadly pale scaled; thorax brown with two narrow longitudinal golden yellow stripes extending the entire length, connected at the front margin by a narrow transverse stripe of the same color. In front of the base of the wing are many pale golden hairs. Pleura pale scaled. Abdomen black above, with light lateral patches at the front angles of the segments, beneath creamy white, segments with a narrow black margin behind. Legs dark, unbanded, the femora pale beneath and at base. All tarsal claws toothed in the female.

25 specimens, Port Limon, Costa Rica; Zent, 20 miles from Port Limon; Rio Aranjuez, near Puntarenas, Costa Rica (F. Knab); Bluefields, Nicaragua (W. F. Thornton).

*Type*. — Cat. no. 10140, U. S. Nat. Mus.

Nearly allied to *Aedes trivittatus* Coquillett, but the golden thoracic lines are narrower.

### *Aedes obturbator*, new species.

Proboscis brown; palpi dark; head behind the eyes pale yellowish; at the sides a dark spot; thorax bronzy yellow, a median dark brown stripe running the whole length, the lateral margin brown with irregular outline; the scutellum is silvery; pleura pale scaled. Abdomen black above, with white basal bands; beneath entirely pale. Legs dark, unbanded, the femora pale beneath. All tarsal claws toothed in the female.

22 specimens, Tarpon Bay, Bahama Islands (T. H. Coffin).

*Type*. — Cat. no. 10141, U. S. Nat. Mus.

Allied to *Aedes auratus* Grabham, but the thorax has a brown median band.

### *Aedes balteatus*, new species.

Proboscis black; palpi black; head behind the eyes pale bronzy, a large dark spot on each side; thorax bronzy yellow on the disk, a rounded deep brown patch on

the front of the lateral margin, scutellum silvery. Abdomen black above, with narrow basal pale bands; beneath pale, the hind angles of the segments black. Legs black, unbanded, femora pale beneath. Tarsal claw formula of the female, 1.1-1.1-0.0.

6 specimens, Santo Domingo, West Indies (A. Busck).

*Type*. — Cat. no. 10152, U. S. Nat. Mus.

Closely resembling *Aedes auratus* Grabham, but the claws of the hind tarsi are simple.

***Aedes thorntoni*, new species.**

Proboscis and palpi black; head behind the eyes dark with a purplish luster, the margin of the eyes silvery, broadened at the sides; thorax violaceous black, the anterior portion silvery white for nearly half with a dark indentation at the middle; two small silvery spots near the hind margin. Abdomen above and beneath violaceous black, each segment with narrow silvery transverse bands below. Pleura silvery scaled. Fore legs deep black, first and second tarsal joints narrowly white at base; middle legs black, the femora marked with silver on the under side for about two-thirds the length, not attaining the base, apex silvery, base and tip of the first tarsal joint and base of the second broadly white; hind femora white, a black ring close to the base and another towards the apex, tibiæ black, first tarsal joint white-ringed at base and apex, second joint white-ringed at base. Tarsal claw formula of the female 1.1-1.1-0.0.

7 specimens, Bluefields, Nicaragua (W. F. Thornton).

Nearly allied to *Aedes insolita* Coquillett and *Aedes podographicus* Dyar & Knab, but differing from both in the details of the markings.

*Type*. — Cat. no. 10143, U. S. Nat. Mus.

***Aedes septemstriatus*, new species.**

Proboscis and palpi black; head bronzy yellow behind the eyes, two blue-black spots upon the vertex separated by a golden line; thorax deep brown with seven narrow golden lines and the front margin golden; a median dorsal line, narrow in front, broadened towards the scutellum, a narrow line on each side of it which stops at the basal fourth of the thorax, outside of these are two slightly oblique lines which extend from the base to the middle of the thorax, lateral marginal stripe extends down the sides in the form of large golden patches; pleura silvery. Abdomen blue-black with median white basal spots on some of the segments, the three last segments spotted with silver at the sides; under surface black with white bands. Legs: first pair black, the base of the first tarsal joint silvery; middle legs black, knees silvery, hind legs black, femora tipped with silver, the base of the first tarsal joint silvery. Tarsal claws of the female simple.

3 specimens, Bluefields, Nicaragua (W. F. Thornton).

*Type*. — Cat. no. 10144, U. S. Nat. Mus.

Differs from any described *Aedes* with simple claws known to us in the median dorsal thoracic line.

**Aedes quadrivittatus Coquillett.**

*Culex quadrivittatus* Coquillett, Can. ent., xxxiv, 293, 1902.

An examination of the types of this species shows it to be referable to *Aedes*, the tarsal claws of the female simple. Mr. Coquillett described it originally in comparison with *Aedes atropalpus* Coq., with which it has no affinity, thus producing a misleading impression.

**Aedes fletcheri Coquillett.**

*Culex flavescens* Theobald (not Fabricius, not de Villers), Mon. Culic, i. 410, 1901.

*Culex fletcheri* Coquillett, Proc. U. S. Nat. Mus., xxv, 84, 1902.

*Culex arcanus* Blanchard, Les Moust., 303, 1904.

Theobald's description of *Culex flavescens* from old specimens in the Hopeian Museum at Oxford appears to agree with our *fletcheri* from the Canadian prairies. We think it may be safely identified with this species.

**Aedes plutocraticus, new species.**

Proboscis and palpi black; head clothed with creamy scales behind the eyes; thorax coppery bronze, a distinct dark brown spot occupying the anterior half laterally joined behind to the lateral brown area; medianly there are two rather ill-defined brownish stripes; abdomen black above, with narrow basal white bands, beneath white, the hind angles with black triangular spots. Wings dark brown, scaled. Legs black, the tibiae and tarsi bronzy beneath; femora white on the under side. Claws of the female toothed.

63 specimens, Nassau, Andros, San Salvador, Tarpon Bay and Powell Point, Bahamas (T. H. Coffin).

*Type*. — Cat. no. 10251, U. S. Nat. Mus.

**Aedes condolescens, new species.**

Proboscis black; head behind the eyes covered with silvery scales; thorax brown. a large silver patch on the disk anteriorly, reaching about three-fourths the length of the thorax, with a broad margin on each side of the brown scales; scutellum brown scaled; abdomen black above with basal white bands on the segments; beneath white with black spots at the hind angles; legs dark, the femora white basally, the white extending nearly to the apex on the under side. Wings dark brown scaled. Claws of the female toothed.

24 specimens, Nassau, Bahamas, June 24, 1903 (T. H. Coffin); Andros, San Salvador, Powell Point and Long Island, Bahamas (T. H. Coffin):

*Type*. — Cat. no. 10248, U. S. Nat. Mus.

**Aedes indolescens, new species.**

Proboscis bronzy brown; head behind the eyes dull brown scaled, the margins of the eyes and a median line silver scaled; thorax bronzy brown, a broad silver

patch on the disk, broadest at the middle and covering the anterior two-thirds of the thorax; abdomen black above, a pale bronzy longitudinal median line; beneath white, with triangular black spots at the angles of the segments. Legs dark, the hind femora mostly white, with a black apical ring; hind tibiæ with a pale longitudinal stripe on the under side, stopping short of the apex. Wing veins brown scaled. Claws of the female toothed.

30 specimens Cayamas, Cuba (E. A. Schwarz); Havana, Cuba (J. W. Taylor); Santo Domingo, West Indies (A. Busck).

*Type.* — Cat. no. 10249, U. S. Nat. Mus.

***Aedes hortator*, new species.**

Proboscis and palpi black; thorax yellowish, the vestiture consisting of golden yellow and bronzy brown scales intermixed, the yellow predominating; abdomen violet black, the fifth and sixth segments with white basal lateral patches, beneath white; legs dark, hind femora white with black apices. Wing veins brown scaled. Claws of the female toothed.

2 specimens, Trinidad, B. W. I. (F. W. Urich).

*Type.* — Cat. no. 10250, U. S. Nat. Mus.

**Genus MEGARHINUS Robineau-Desvoidy.**

***Megarhinus superbus* Dyar & Knab.**

*Megarhina hamorrhoidalis* Osten Sacken (not Fabricius), Cat. Dipt. N. A., Smiths. Misc. Colls., 18, 1878.

*Megarhinus superbus* Dyar & Knab, Smithsonian Miscellaneous Coll. (Quart. Iss.), xlviii, 255, 1906.

Mr. S. Henshaw has kindly sent us for examination the three specimens from the Loew collection on which Osten Sacken based his Cuban record of *hamorrhoidalis* Fab. They prove to be our species.

Since we characterized this species, two additional specimens of the female have come to hand, through the kindness of F. W. Urich. These show the red lateral tufts on the seventh segment, though less pronounced than in the male. The red cilia occupy only the posterior two thirds of the margin, while on the eighth segment they appear to be absent altogether. Mr. Urich writes: "These Megarhini are so wild when they emerge, that they damage themselves a great deal if not killed soon." We have also received two males of this species from Bluefields, Nicaragua, through Dr. W. F. Thornton.

***Megarhinus septentrionalis* Dyar & Knab.**

*Megarhinus septentrionalis* Dyar & Knab, Smithsonian Misc. Coll. (Quart. Iss.), xlviii, 249, 1906 (Sept.).

*Megarhinus herrickii* Theobald, The Entomologist, xxxix, 241, 1906 (Nov.).

Mr. Theobald obviously redescribes our species, having independently recognized that the continental North American form is not conspecific with the one from Porto Rico.

## Genus ANOPHELES Meigen.

*Anopheles quadrimaculatus* Say.

Through the kindness of Dr. A. Handlirsch of the Vienna Museum, Dr. C. von Kertész of the Hungarian National Museum, Prof. R. Blanchard of the Faculty of Medicine of Paris and Mr. F. V. Theobald, we have become possessed of a number of specimens of the European *Anopheles maculipennis* Meig. These abundantly establish our contention of the distinctness of this form from any of the American species. *Maculipennis* is nearer to the Californian *occidentalis* D. & K. than to the Eastern *quadrimaculatus* Say, but lacks the apical yellowish wing spot characteristic of *occidentalis*.

## Genus CULEX Linnæus.

*Culex toweri*, new species.

Head behind the eyes margined with silvery gray; thorax clothed with rather pale yellowish brown scales above with faint traces of dorsal stripes; abdomen entirely black above, beneath with white lateral basal spots and a pale median area. Wings with the veins and fringe dark brown scaled. Hind legs black with the first to fourth tarsal joints narrowly white ringed at both ends, fifth joint white ringed at the base; knees white tipped, tibiæ rather broadly white tipped; on the first and second pairs of legs the annulations are much reduced. Proboscis and palpi black.

39 specimens, Mayaguez, Porto Rico (W. V. Tower).

*Type*. — Cat. no. 10222, U. S. Nat. Mus.

The larva falls with *Culex lamentator* D. & K. in the table and is much like it, but the adults are quite distinct.

*Culex fur*, new species.

Proboscis black; head broad, black behind the eyes; thorax with the anterior half covered with brassy scales, two large dark patches within this area on the disk before; posterior half of the thorax deep brown. Abdomen black above, the hind margins of the segments with yellowish hairs; beneath dirty gray. Legs black. Wings brown scaled along the veins, the scales on the apical portion broad. Tarsal claws simple.

One specimen, ♀, Colon, Panama (A. C. H. Russell).

*Type*. — Cat. no. 10259, U. S. Nat. Mus.

The larva is unknown to us.

---

## AN EARLY ACCOUNT OF THE COPULATION OF STEGOMYIA CALOPUS.

BY FREDERICK KNAB,

WASHINGTON, D. C.

In the third volume of the *Mémoires de Mathématique et de Physique*, published in 1760, the French commander Godeheu de